

as B. If a fifth be joyn'd to them on either side in as close a position as it can, which is the propriety of the *Texture*, it makes a *Trapezium*, or four-sided Figure, two of whose angles are 120. and two 60. degrees, as C. If a sixth be added, as before, either it makes an *equilateral triangle*, as D, or a Rhomboid, as E, or an *Hex-angular Figure*, as F, which is compos'd of two *primary Rhombes*. If a seventh be added, it makes either an *equilatero-hexagonal Figure*, as G, or some kind of six-sided Figure, as H, or I. And though there be never so many placed together, they may be rang'd into some of these lately mentioned Figures, all the angles of which will be either 60. degrees, or 120. as the figure K, which is an *equiangular hexagonal Figure* is compounded of 12. *Globules*, or may be of 25, or 27, or 36, or 42, &c. and by these kinds of texture, or position of globular bodies, may you find out all the variety of regular shapes, into which the smooth surfaces of *Alum* are form'd, as upon examination any one may easily find; nor does it hold only in superficies, but in solidity also, for it's obvious that a fourth *Globule* laid upon the third in this texture, composes a regular *Tetrahedron*, which is a very usual Figure of the *Crystals* of *Alum*. And (to hasten) there is no one Figure into which *Alum* is observ'd to be crystallized, but may by this texture of *Globules* be imitated, and by no other.

I could instance also in the Figure of *Sea-salt*, and *Sal-gem*, that it is compos'd of a texture of *Globules*, placed in a *cubical* form, as L, and that all the Figures of those Salts may be imitated by this texture of *Globules*, and by no other whatsoever. And that the forms of *Vitriol* and of *Salt-Peter*, as also of *Crystal*, *Hore-frost*, &c. are compounded of these two textures, but modulated by certain proprieties: But I have not here time to insist upon, as I have not neither to shew by what means *Globules* come to be thus context, and what those *Globules* are, and many other particulars requisite to a full and intelligible explication of this propriety of bodies. Nor have I hitherto found indeed an opportunity of prosecuting the inquiry so far as I design'd; nor do I know when I may, it requiring abundance of time, and a great deal of assistance to go through with what I design'd; the model of which was this:

First, to get as exact and full a collection as I could, of all the differing kinds of Geometrical figur'd bodies, some three or four several bodies of each kind.

Secondly, with them to get as exact a History as possibly I could learn of their places of Generation or finding, and to enquire after as many circumstances that tended to the Illustrating of this Enquiry, as possibly I could observe.

Thirdly, to make as many trials as upon experience I could find requisite, in Dissolutions and Coagulations of several crystallizing Salts; for the needfull instruction and information in this Enquiry.

Fourthly, to make several trials on divers other bodies, as Metals, Minerals, and Stones, by dissolving them in several *Menstruums*, and crystalizing them, to see what Figures would arise from those several *Compositums*.

Fifthly,

Fifthly, to make Compositions and Coagulations of several Salts together into the same mass, to observe of what Figure the product of them would be; and in all, to note as many circumstances as I should judge conducive to my Enquiry.

Sixthly, to enquire the closeness or rarity of the texture of these bodies, by examining their gravity, and their refraction, &c.

Seventhly, to enquire particularly what operations the fire has upon several kinds of Salts, what changes it causes in their Figures, Textures, or Energies.

Eighthly, to examine their manner of dissolution, or acting upon those bodies dissoluble in them; The texture of those bodies before and after the process. And this for the History.

Next for the Solution, To have examin'd by what, and how many means, such and such Figures, actions and effects could be produc'd possibly.

And lastly, from all circumstances well weigh'd, I should have endeavoured to have shewn which of them was most likely, and (if the informations by these Enquiries would have born it) to have demonstrated which of them it must be, and was.

But to proceed, As I believe it next to the Globular the most simple; so do I, in the second place, judge it not less pleasant; for that which makes an Enquiry pleasant, are, first a noble *Inventum* that promises to crown the successful endeavour; and such must certainly the knowledge of the efficient and concurrent causes of all these curious Geometrical Figures be, which has made the Philosophers hitherto to conclude nature in these things to play the Geometrician, according to that saying of Plato, *ὁ θεὸς γεωμετρεῖ*. Or next, a great variety of matter in the Enquiry; and here we meet with nothing less than the *Mathematicks* of nature, having every day a new Figure to contemplate, or a variation of the same in another body.

Which do afford us a third thing, which will yet more sweeten the Enquiry, and that is, a multitude of information; we are not so much to grope in the dark, as in most other Enquiries, where the *Inventum* is great; for having such a multitude of instances to compare, and such easie ways of generating, or compounding and of destroying the form, as in the *Solution* and *Crystallization* of Salts, we cannot but learn plentiful information to proceed by. And this will further appear from the universality of the Principle which Nature has made use of almost in all inanimate bodies. And therefore, as the contemplation of them all conduces to the knowledge of any one; so from a Scientific knowledge of any one does follow the same of all, and every one.

And fourthly, for the usefulness of this knowledge, when acquir'd, certainly none can doubt, that considers that it carries us a step forward into the Labyrinth of Nature, in the right way towards the end we propose our selves in all Philosophical Enquiries. So that knowing what is the form of Inanimate or Mineral bodies, we shall be the better able to proceed in our next Enquiry after the forms of Vegetative